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Roll, Robert

TO

The Honorable Board of Directors

Santa Clara Valley Water Conservation District

Gentlemen:

The attached Report is presented in accordance with instructions as contained in your minutes of January 13, 1959.

(Re plan of water development in the Valley)

JUL 1959

WATER RESOURCES
CENTER ARCHIVES

UNIVERSITY OF CALIFORNIA
BERKELEY

SANTA CLARA VALLEY WATER CONSERVATION DISTRICT

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Section I. Introduction

A. History

The Santa Clara Valley has many important attributes which are responsible for the tremendous agricultural, industrial and urban expansion which has developed in recent years. This expansion, although creating economic prosperity, has also developed a progressively increasing water demand.

Subsequent to its organization in 1929, the Santa Clara Valley Water Conservation District has been actively engaged in the solution of the Valley's water problems. This is evidenced by the high degree of local water development and conservation which exists today in the form of storage, transmission and percolation facilities. These facilities have been constructed, enlarged and modified in the past to conform to the increasing and variable water requirements of the valley.

The District has constructed and presently operates eight storage dams and reservoirs on the major tributary streams of the valley. The storage capacity of these structures is approximately 140,000 a.f. In addition to these, the District has constructed numerous pipelines, canals and other conveyance or distribution facilities to efficiently conserve and distribute the runoff waters which formerly wasted into San Francisco Bay. These water conservation facilities represent a capital investment of over $13,000,000.

B. Purpose and Scope of Report

A definite need for additional distribution facilities exists today in the Santa Clara Valley. This need is urgent under present conditions and will become critical in the near future when an importation program is inaugurated. Upon instructions from the Board of Directors of the SCVWCD, this report has been prepared covering the following objectives:

(1) To evaluate present and future water requirements in Santa Clara Valley.

(2) To evaluate present and future sources of supply.

(3) To recommend a practical plan of development for assuring the entire valley of adequate water supplies for future growth.

(4) To prepare cost estimates for a proposed plan of development.

(5) To recommend the most satisfactory method of financing the proposed project.

Section II. Water Requirements and Supply

A. General

The solution to the water problems of Santa Clara Valley is dependent upon two factors; namely, supply and distribution. The local water supply, although approximately equal to present requirements for domestic, agricultural and industrial purposes, will require substantial supplementation in the near future. The distribution of water to deficient areas within the valley, however, is a problem that requires immediate attention as well as long-range planning.

Existing water conservation facilities have been developed to the extent that nearly all of the annual salvable surface waters of the valley are either used directly or are percolated to the underground aquifers for subsequent beneficial use. From a storage standpoint, District conservation efforts have resulted in near optimum salvage of local runoff waters. Remaining reservoir sites such as those on the Penitencia, Guadalupe and Calabazas Creeks are marginal in feasibility while representing only minor sources of supply.

An exception to full utilization of local water is storage in the Coyote and Leroy Anderson reservoirs, located on the Coyote Creek. In years of normal or above normal rainfall, accumulated storage in these reservoirs exceeds the ability of existing conveyance facilities to receive and distribute the entire supply. This has resulted in substantial carry-over from year to year, a wasteful situation in seasons of heavy rainfall. On the other hand, a definite shortage of water exists in the northwestern portion of the valley for both municipal use and groundwater recharge.

B. Present Water Requirements and Supply

The seasonal natural flow of streams tributary to Santa Clara Valley averages approximately 260,000 a.f., of which 60,000 a.f. is tributary to the southern portion of the valley. The 60,000 a.f. inflow to South Santa Clara Valley, when fully developed, will adequately supply the requirements of this area for many years. The 150,000 a.f. that is salvaged and put to beneficial use each year, out of the total 200,000 a.f. runoff into the northern Santa Clara Valley, represents the minimum present requirement. The immediate problem in North Santa Clara Valley is the lack of distribution facilities to fully utilize existing supplies and to provide for the rapidly increasing demand for water.

Present water requirements in North Santa Clara Valley are met to a large extent by water pumped from the underground. The underground water basins are replenished both by natural percolation and by conservation operations of the District. The District operates 330 acres of percolation facilities in addition to the use of natural stream channels for the purpose of recharging the underground water supply.

Existing percolation areas operated by the District are located at strategic positions throughout the Forebay Zone of the valley. The effectiveness of these percolation areas is primarily dependent upon the ability of storage and conveyance facilities to provide an adequate supply. The major percolation areas are located along the Coyote, Alamitos, Guadalupe and Los Gatos creeks. Existing facilities are adequate to distribute locally salvaged water to the Coyote, Alamitos and Guadalupe percolation areas.

The immediate ground water recharge problem exists on the Los Gatos Creek system. The problem is being dramatically emphasized during the current 1958-1959 season. This year, Lexington Reservoir, representing the only major storage reservoir on the Los Gatos Creek, was emptied on June 26. Although this past year was sub-normal in rainfall and yielded only 10,000 a.f. of storage in Lexington Reservoir (capacity 21,500 a.f.), it is anticipated that conditions will be similar in future average years when maximum use is made of all percolation facilities of the system. In this case, the result will be a five-month period each year during which there will be practically no ground water recharge accomplished at this important location.

In addition to the percolation requirements in the Los Gatos Creek system, supplies are needed to supplement the present municipal pumping draft from the underground water basins in the northwestern portion of the valley. The cities of Sunnyvale, Cupertino, Mountain View, Los Altos and Palo Alto have indicated an immediate need for a surface supply to meet their ever increasing water demand.

As previously mentioned, a nominal excess supply of local water is stored in the Coyote Creek reservoirs during years of normal or above-normal rainfall. This supply, although inadequate to satisfy future requirements, could alleviate the present percolation and municipal deficiencies which exist in the northwestern portion of the valley.

C. Future Water Requirements and Supply

The immediate water problem of North Santa Clara Valley, as has been stated, primarily involves the broader distribution of local supplies. The principal consideration for the solution of the future water problems of this area, however, involves the importation and distribution of water from other sources. This is emphasized by recently published engineering reports which estimate that by the year 1980 there will be an additional demand for water of 80,000 a.f., and that in the year 2010 this supplemental demand, in excess of local supplies, will be 160,000 a.f.

In anticipation of the future supplemental water requirements, numerous sources of supply have been investigated. These investigated sources have included additional local development as well as cooperative developments with adjacent counties, the State of California and with the Federal Government.

Additional development of water from streams tributary to North Santa Clara Valley was thoroughly investigated several years ago with a dual purpose in mind. Additional dams constructed on the remaining uncontrolled streams were proposed and investigated for feasibility on the basis of both water conservation and flood control use. The proposed dams were known as: (1) Penitencia Creek Dam, (2) Second Guadalupe Creek Dam, (3) Silver Creek Dam, (4) Calabazas Creek Dam, (5) Permanente Creek Dam and (6) San Tomas Creek Dam. The combined average annual yield of these proposed dams was determined to be approximately 9000 a.f., representing only a minor source of supply.

In contrast to the near optimum water conservation development in the northern portion of the valley, an important portion of the annual stream flow into South Santa Clara Valley is presently uncontrolled. The principal undeveloped source of supply flows in the lower Uvas Creek, a tributary to the Pajaro River. An engineering study has been completed to determine the feasibility of constructing a large dam approximately eight miles below the recently completed 10,000 a.f. Uvas Dam and Reservoir constructed by the South Santa Clara Valley Water Conservation District. A dam at this location would create a reservoir with a storage capacity of 100,000 a.f. which would produce an average yield of about 36,000 a.f. annually.

A cooperative development with Santa Cruz County represents another potential source of supply to this valley. The development being considered would involve a joint project between Santa Cruz County and Santa Clara Valley Water Conservation District to conserve existing surplus waters in Soquel Creek. This proposed project would include a dam and reservoir near the confluence of the east and west forks of Soquel Creek in Santa Cruz County. The project would also include pipelines, pumping plants and a tunnel to convey water into the Los Gatos Creek watershed for subsequent storage and beneficial use in Santa Clara Valley.

Another local source of supply is the reclaimed sewage waste of the North valley. The District is currently engaged in a cooperative project with the City of San Jose to determine the best way in which to salvage the annual waste of over 30,000 a.f. which is being discharged into San Francisco Bay.

The total of all these local sources of supplemental water would be inadequate to meet the future requirements of the valley. In the event that all of these sources were fully developed, the resultant supply would satisfy the ever-increasing demands only for a short time. Some of these projects, however, such as the Lower Uvas, Soquel and sewage reclamation projects, can be integrated with imported waters to help meet the ultimate requirements of the area.

It became apparent several years ago that it would ultimately be necessary to import water into Santa Clara Valley from an outside source. As a result, the existing distribution facilities of the District have been planned so that they could become part of an expanded system that would distribute imported water throughout the valley.

Upon formation of the Tri-County Authority (Santa Clara-Alameda-San-Benito Water Authority), a thorough review of all proposed importation plans was conducted. The Authority, as a result of this review, found that the Pacheco Pass Project was capable of delivering water to Santa Clara valley at a lower cost than any other project. This project has another advantage in that it delivers water to northern Santa Clara valley at a point where it can be distributed to all potential users by the existing and proposed facilities of the District.

With these factors in mind, the project described in the following Section of this report has been designed as the first stage of a long range plan to meet the total water requirements of Santa Clara valley.

Section III. Proposed Plan of Development

A. General Plan

The plan of project development as herein proposed provides for the conveyance of water to the westside streams, particularly the Los Gatos Creek system, and to the northwestern municipalities of the valley. The plan envisions the construction of necessary pipelines, pumping plants and appurtenances capable of receiving water from the District's Coyote Canal on the eastern side of the valley for delivery to the described areas of need. The Coyote Canal is utilized as the supply point due to its capability or receiving reservoir releases from Leroy Anderson Dam in addition to importation deliveries received from the Pacheco Pass Project. The project as proposed, therefore, would be equally useful both for the distribution of local water supplies stored in the Coyote reservoirs as well as those received from an importation source.

B. Description of Project

The proposed project begins at the District's Coyote Canal near Bailey Avenue, approximately one mile southeast of the town of Coyote, From the Coyote Canal, water would be transported southwesterly, by pipeline, under Highway 101 and along Bailey Avenue to a pumping plant. Water would then be pumped into a short tunnel through the Santa Teresa Hills and discharged into Calero Reservoir for regulatory storage.

From Calero Reservoir water would be conveyed in a northwesterly direction by pipeline to Los Gatos Creek, immediately downstream from Vasona Reservoir. At this point, discharge appurtenances would be installed to permit percolation releases into the Los Gatos Creek as well as diversion into Vasona Reservoir for percolation in San Tomas, Saratoga and Calabazas Creeks.

From Los Gatos Creek, a pipeline would be constructed along the Southern Pacific Railroad right-of-way to convey water to the cities of Sunnyvale, Cupertino, Mountain View, Los Altos and Palo Alto. A low-head pumping plant would be installed near Pollard Road. Water treatment for municipal use would be accomplished by a central treatment plant located near Monta Vista.

C. Project Features

1. Storage

Regulatory storage for all transported water will be accomplished by Calero Reservoir, thereby eliminating the cost of new storage facilities. This reservoir has a maximum water surface elevation of 483, at which the storage is 9200 acre-feet. Storage in Lexington Reservoir on the Los Gatos Creek can be used in conjunction with that in Calero Reservoir to provide an alternate dependable source of supply for temporary or short period deliveries to the northern municipalities.

2. Pipeline

First stage construction would consist of 30.5 miles of buried pipeline, ranging in diameter from 60 inches down to 30 inches. This pipe would be subjected to hydrostatic and working pressure heads ranging from 50 to 400 feet of water.

Pipeline appurtenances, as estimated in the following section, would include necessary structures for filling and draining the pipeline, protection against air binding and for regulation of flow.

3. Pumping Plants

(a) Calero Pumping Plant

A pumping plant capable of lifting the design rates of flow from the pipeline on Bailey Avenue to the Calero Tunnel inlet is proposed. This will involve a static lift of 210 feet. The discharge lines from the pumping plant to the tunnel inlet would be approximately 1950 feet in length.

The pumping plant would have an initial capacity of 125 cubic feet per second, requiring an input of 3830 horsepower. This plant would have provisions for additional pump installations in anticipation of future requirements.

(b) Vasona Pumping Plant

This plant would be located approximately 1.6 miles west of Los Gatos Creek near the S.P.R.R. tracks. The initial capacity of this plant would be 78 cubic feet per second, to be used for municipal delivery of water to the north valley cities. This would be a low-head plant involving a static lift of 80 feet when receiving water from Calero Reservoir or occasionally 125 feet when receiving water from Lexington Reservoir.

4. Tunnel

The proposed tunnel through the Santa Teresa Hills would have a design capacity of 225 cubic feet per second. The tunnel would be concrete lined, having a 7 foot diameter horseshoe cross-section. The total length would be approximately 1325 feet.

The purpose of this tunnel is to reduce the pumping head at the Calero Pumping Plant. Based on current estimates, the resultant saving in pumping costs is greater than the annual tunnel cost.

A feasibility report on the tunnel site was recently completd. This study revealed that the site is geologically suitable for this tunnel and no serious problems are anticipated.

5. Right of Way

The purchase of permanent easements for all proposed features is anticipated at those locations outside of dedicated roads or streets. The width of required pipeline easements varies from 20 feet to 30 feet, depending upon the terrain and location. In addition to the permanent easements, it is contemplated that temporary construction rights-of-way be secured to facilitate original or subsequent construction.

Section IV. Estimate of Cost

A. Construction Costs

An estimate of total capital costs for the facilities described in the preceding section is based on current prices and includes all items necessary for complete construction of the proposed project.

TABLE I

Capital Costs

Description	Estimated Cost
Pipeline	$5,698,000
Pipeline Appurtenances	459,000
Calero Pumping Plant	375,000
Vasona Pumping Plant	200,000
Calero Tunnel	300,000
Right of Way	260,000
Engineering, Supervision & Contingencies	1,823,000
Sub Total Cost	$9,115,000
Water Treatment Plant	2,500,000
Total Estimated Project Cost	$11,615,000

B. Annual Costs

In analyzing the magnitude of annual payments necessary for bond retirement, interest, power costs, maintenance and operation, many factors are involved. Payments for capital recovery depend upon the type of financing, the rate of interest and the length of the repayment period. Annual payments for electrical power, on the other hand, are dependent primarily upon the quantity of water to be pumped. In contrast, annual costs for maintenance and operation are essentially fixed and constant, increasing only slightly with the age of installed facilities.

It is estimated that the first stage facilities will provide an adequate distribution system until the year 1990, or for thirty years. Therefore, a repayment period of thirty years is suggested in order to facilitate equal capital recovery payments for the entire period. A repayment period of less than thirty years would involve larger costs during the early years of operation, while a schedule for more than thirty years would possibly overlap with the repayment of necessary second stage facilities. An interest rate of four percent was assumed in the estimate of annual costs.

In computing electrical power costs incurred by the pumping plants, a rate of $0.008 per kilowatt-hour was assumed. The electrical power requirements for the Calero Pumping Plant reflect the demand for schedule percolation and municipal deliveries. Water pumped at the Vasona Plant, on the other hand, will be used for municipal deliveries only. The proposed delivery schedule provides for a constant annual delivery of 28,600 acre-feet throughout the design period for percolation in the Los Gatos Creek and minor westside streams, and an annual municipal delivery increasing uniformly from 10,000 acre-feet the first year to 36,500 acre-feet in the thirtieth year. Average annual power requirements for the Calero and Vasona pumping plants, therefore, are estimated at 14,630,000 and 2,645,000 kilowatt-hours, respectively. The resultant annual power costs, then, are for an average of 17,275,000 kilowatt-hours, or $138,200. Minor power costs incidental to the water treatment plant are included in the estimated cost of treatment and are therefore not separately enumerated.

Average annual costs for the operation and maintenance of the proposed project are estimated at $102,300 for the pipeline, tunnel and pumping plants, and $146,100 for the water treatment plant.

C. Summary of Costs

A summary of estimated capital and annual costs is presented in Table II below:

TABLE II

Summary of Estimated Capital and Annual Costs

Description	Total Capital Cost	Average Annual Repayment (30yr.@4%)	Average Annual Power Cost (1960-1990)	Average Annual Maint.& Operation	Total Average Annual Cost
Pipeline, Pumping Plants, Tunnel	$9,115,000	$527,100	$138,200	$102,300	$767,600
Water Treatment	2,500,000	144,600	0	146,100	290,700
	$11,615,000	$671,700	$138,200	$248,400	$1,058,300

SECTION V. METHOD OF FINANCING

Statement of Problem

Simply stated, the problem is to tailor the method of financing so that there is an equitable distribution of costs to all beneficiaries. Unfortunately, the problem is not as simple as it sounds.

Part of the cost of this project is for distribution of agricultural water, and part of the cost for distribution of municipal water. In both instances a portion of the water will be taken directly from the transmission mains by the users and a portion will be percolated into the underground basin and subsequently pumped by the users. Some of the water will be delivered raw and some treated.

All of the previously constructed projects of the District have been financed by a tax on all land within the District boundaries. The theory upon which this method of financing was based was that all water was being pumped from wells for both agricultural and municipal uses and as a result all users should participate in the repayment of costs.

It is obvious that the most equitable method of distributing costs to users when all are pumping from wells would be to institute a pumping tax. Unfortunately the ideal solution to a problem cannot always be achieved and a practical solution must be devised. This is the case here.

In Santa Clara valley there were thousands of wells pumping from the underground aquifers prior to any conservation works being constructed. These wells, together with any drilled since the inception of the District, can be assumed to have a legal right to the naturally percolated waters in the underground aquifers. Before any pumping tax could be inposed in this area, it is safe to assume that there would have to be an adjudication of all existing water rights made. This in itself would take years to accomplish. After this task was completed the imposition of such a tax would, in equity, have to be approved by a majority of the users.

At the time the District was formed, it was evident that such a method of financing was not practicable. As a result the present system was devised to make the distribution of costs as equitable as possible. This system received the approval of the taxpayers upon the formation of the District and subsequently on seven separate occasions when bond issues were overwhelmingly approved at the polls.

During the last few years there has been a rapid change in land use in the valley with a consequent change in water use. The transfer of agricultural lands to industrial and urban uses has produced a corresponding change in water use.

As long as the municipal users continued to obtain their water from wells, the existing method of taxation continued to be the most practicable. Under the proposed plan of supplying treated water directly to the northwest valley cities, such a financing plan should be reviewed in the light of changing conditions.

Because of these changing conditions in the valley the District in 1957 adopted a policy which, in brief, stated that in those areas in which percolation could not supply the area's needs, the District would construct a surface distribution main into it if the water users would provide the necessary local distribution facilities. This policy statement did not change the long-standing policy of providing equitable benefits for all portions of the District, but merely clarified it and spelled out its application to specific cases.

This policy provides a basis for an equitable distribution of costs for the presently proposed Cross Valley Distribution System.

The District admittedly cannot transmit water through the underground aquifers rapidly enough to meet the ultimate demands of the northwest County cities. Those cities lying in the central portion of the valley, namely, Santa Clara, San Jose, Campbell and Milpitas can be served their ultimate requirements through underground aquifers.

The system herein proposed provides for the needs of all areas within the valley (including some areas outside of the District boundaries) for the next 30 years, or until 1990. At that time the second stage of this project would have to be constructed. The project, as planned, provides for the supplemental needs of all three classes of users: (a) agricultural, (b) municipal users who will continue to obtain their entire supply of water from wells and (c) municipal users who will be furnished supplemental water from a surface source after treatment.

One portion of this project is of common benefit to all users. This is the transmission facility. This conduit will supply supplemental water for percolation which will then be available to both agricultural and municipal users pumping from wells. It will also supply supplemental water to those cities that need a surface delivered supply. This portion of the project, consequently, should be financed equally by all users.

The treatment plant, however, is a special benefit to a limited area of the valley and its cost should rightfully be charged to its beneficiaries. That this is justified will be evident when we consider that those users pumping from wells are in effect paying for treatment by their pumping costs. Instead of having their raw water delivered to them on the surface at which point it has to be treated, they are accepting delivery in the underground aquifers where it is purified naturally.

The one remaining problem is what to do about service to areas outside of the District? This problem has already been resolved by the District Board of Directors. In April 1959 the Board adopted a policy of requiring areas outside of the District to pay $3.00 per acre-foot more for water served to them than would be paid if they were in the District. This additional charge would compensate for the fact that these areas do not pay, nor have not in the past, paid taxes to the District.

Financing Plan

Using the figures developed in Section IV for total capital costs and average annual costs over a 30 year repayment period, and the plan outlined above, an equitable financing plan can be developed.

As explained above the costs for the transmission system should be distributed equally to all beneficiaries. These costs can be broken down into two components, namely, capital recovery and maintenance and operation including power costs.

The total capital investment for the transmission facilities is $9,115,000 with an average annual repayment cost of $527,100 over a thirty-year period. The first year repayment costs would amount to $668,433.

The present (1959-60) assessed valuation of land within the District is $217 million. This valuation has been increasing about 17.5% per year for the last seven years. Although it can safely be assumed that this valuation will continue to increase throughout the repayment period, although not necessarily at the present rate, it will be in the interest of conservatism to use the present valuation in all computations.

From these figures it is possible to determine the tax rate for the first year and the average annual tax rate which would be required to pay back the capital costs of the project. The required tax rate for the first year would be 31 cents and the average tax rate would be 24 cents per $100 of assessed value of land only.

In addition to the repayment of the capital investment there would also have to be a sum raised to pay the power costs involved in pumping this water through the distribution system as described in Section III and to pay the annual maintenance and operation cost involved in such a system. The amounts required for these purposes are $196,300 for the first year and an average annual amount of $240,500.

These sums should not be rasied by including them in the original bond issue because they are funds that are needed for payment of annual costs and not initial construction costs. As a result, they should be raised by levying a special assessment for this specific purpose. The assessment for the first year would be 9 cents and the average annual rate would be 11 cents.

The average annual cost of treatment would be $290,700, which for an average annual municipal use of 24,350 acre-feet would amount to $11.94 per acre-foot for treatment. This would be charged to those water users within the District who would be taking treated water.

Any municipal water users outside of the District boundaries should be charged for the cost of treatment plus the $3.00 additional charge in lieu of taxes. Thus, these users would pay $14.94 per acre-foot for treated water.

Those cities who will continue to receive their total water supply from wells, as well as the agricultural users, will then be paying approximately the same as those cities receiving treated water. This becomes evident when we consider that the average cost of pumping from wells in the valley approximates the average annual treatment cost mentioned above.

The above examples apply to the cost of distribution and treatment only. These would be prices of water to the various consumers based on the use of locally developed supplies. Obviously, when imported water becomes available, it cannot be served at the same price as locally developed water. In addition to the transmission and treatment costs there must be added the cost of importation. Although no firm prices for imported water are available at the present time, it is estimated that this cost will approximate twenty dollars per acre foot.

Inasmuch as one-half of all imported water will be used by municipalities directly and the other one-half will be percolated, it would be most equitable to pay for the cost of importation by a land tax on all land within the District, and to add the cost per acre-foot of this imported water to the price charged areas outside of the District boundaries.

What does all of this mean to the average property owner? A few examples will indicate the effect on various users.

The average city lot can be assumed to have an assessed valuation of less than $1000. Even if the $1000 figure, which is high, is used the tax rate of $0.35 per $100 of land value will then mean a tax of only $3.50 per year to the average city taxpayer for the construction, maintenance and operation of these distribution facilities.

In those cities which will continue to pump from wells this average tax bill of $3.50 per city lot will be the total cost for locally developed water because the cost of pumping from wells is already included in the water rates they are paying.

In those cities which require a treated supply the $3.50 distribution cost per average lot will probably also be the total cost to the taxpayer. This is because of the fact that the treatment cost per acre-foot is approximately equal to the present cost of pumping from wells. This pumping cost will not be required under this plan.

For agricultural land the average assessed valuation probably does not exceed $600 per acre, so that the cost to an agricultural user would be about $2.10 per acre.

Water users outside of the District would have to pay the $11.94 per acre-foot treatment cost plus the $3.00 per acre-foot charge in lieu of taxes. The average lot of one-fifth of an acre would use approximately 0.3 acre-foot per year so that the cost to the taxpayer in a city outside of the District boundary would be about $4.50 per year.

These examples are all based on the use of locally developed water. When imported water is distributed by this system the cost of this water delivered to the valley must be added.

If we assume that the cost of imported water will be about $20 per acre-foot this will add approximately $6.00 per year to the average city dweller's tax bill. This additional cost would be the same inside and outside the District.

In all the above calculations and examples an assessed valuation of land within the District of $217 million was used, a figure which is extremely conservative for averages over the next 30 years. If the actual assessed valuation increases, as it undoubtedly will do, it will lower the tax rate as computed above, but the cost to the average taxpayer will remain approximately the same.

SECTION VI. CONCLUSIONS AN RECOMMENDATIONS

For many years the Santa Clara Valley Water Conservation District has been planning for the time when it would be necessary to distribute water from its Coyote River source and from imported supplies northwesterly across the valley. That time has now arrived.

Most of the cities in the northwesterly portion of the valley have requested the District to proceed with the preparation of plans for such a distribution system. This report is the answer to these requests and to the District's established policy of planning facilities to adequately supply the water needs of all portions of the valley.

The project outlined in Section III of this report constitutes the first stage of a long range plan designed to meet the total water needs of Santa Clara valley. This system will make available from local sources, to the cities of Palo Alto, Mountain View, Sunnyvale, Los Altos and Cupertino the supply of potable water that they need immediately. It will also provide for increased percolation and direct use of water for those users who do not need treated water or who can pump from wells more economically than they can take water from a surface source.

In addition, this project provides the capacity necessary to distribute the imported water that will be required during the next thirty years.

The project is so designed and the facilities so located that it can easily have integrated into it projects to develop water in either the Lower Uvas area or the Soquel area.

The cost estimates given in Section IV are based on current construction costs and are reasonable for the results achieved. The financing plan outlined in Section V provides an equitable correlation between project costs and project benefits.

It is, therefore, recommended that the Board of Directors of the Santa Clara Valley Water Conservation District present to the voters of the District a proposal to issue general obligation bonds in the amount of $11,615,000 to finance the construction of the project described in Section III of this report. The proceeds of such a bond issue shall be used to finance the construction work described herein; the cost of all necessary lands and rights of way; and the cost of the bond election and the administrative, legal and clerical costs incidental thereto.

It is further recommended that the financing plan outlined in Section V of this report be adopted as the method by which project costs will be distributed to project beneficiaries. In this connection, it is recommended that the Board of Directors of the Santa Clara Valley Water Conservation District present to the voters of the District a proposal to raise, by means of a special assessment, the monies required to pay the annual maintenance, operation and power costs of the transmission system as outlined in Section V above.

It is further recommended that in the event that there remains from and out of said sum of $11,615,000 a surplus after the completion of the works described in Section III above, together with the acquisition of the necessary lands and rights of way, and the costs of the election, that such surplus be used for the completion of other works, properties and structures necessary and convenient for the conservation works of the District.

Respectfully submitted,

J Robert Roll

J. Robert Roll
Chief Engineer and Manager